

WHAT IS CLAIMED IS:

1. A method for producing a structured composite material for accommodating passage of fluids through the structured composite material, the method comprising the steps of:

5 forming a first layer having a first shrinkage extent;

156 forming a second layer having a second shrinkage extent different from the first shrinkage extent;

bonding the second layer to the first layer to form a composite material; and

10 shrinking at least one of the first layer and the second layer to produce the structured composite material.

2. The method of claim 1, wherein the first layer comprises a propylene polymer and the second layer comprises an ethylene-propylene copolymer.

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3. The method of claim 2, wherein during the shrinkage step, the second layer shrinks relative to the first layer.

20 4. The method of claim 1, further comprising the step of heating the composite material to affect shrinkage of at least one of the first layer and the second layer.

5. The method of claim 1, further comprising the step of creping the composite material prior to the shrinking step.

6. The method of claim 1, further comprising the step of stabilizing the creped first layer by bonding the second layer to the first layer.

7. The method of claim 1, wherein the second layer is bonded to the first layer by one of thermal bonding, pin bonding and differential speed bonding.

8. The method of claim 1, further comprising the step of stretching the second layer before the second layer is bonded to the first layer.

9. The method of claim 8, wherein the second layer is stretched in a machine direction to about 1.5 to about 6.0 times an initial length.

10. The method of claim 8, wherein the second layer is stretched in a machine direction to about 2.0 to about 4.0 times an initial length.

11. A method for producing a structured heterogeneous material to accommodate passage of fluids through the structured heterogeneous material, the method comprising the steps of:

providing a first homogeneous component having a first shrinkage
5 extent;

providing a second homogeneous component having a second shrinkage extent different from the first shrinkage extent;

producing a heterogeneous material by combining the first homogeneous component and the second homogeneous component; and

10 shrinking at least one of the first homogeneous component and the second homogeneous component to create the structured heterogeneous material.

12. The method of claim 11, wherein the heterogeneous material shrinks to about 0% to about 99% of an initial length of the heterogeneous material.

15 13. The method of claim 11, wherein the heterogeneous material shrinks to about 10% to about 70% of an initial length of the heterogeneous material.

14. The method of claim 11, further comprising the step of heating
20 the heterogeneous material to create the structured heterogeneous material.

15. The method of claim 14, wherein the heterogeneous material is heated by one of a cure oven, a hot air gun, an infrared-heater, a microwave, radio frequency and a through-air bonder.

5 16. The method of claim 14, further comprising the step of creping the heterogeneous material prior to heating the heterogeneous material.

10 17. The method of claim 11, further comprising the step of adding a filler to at least one of the first homogeneous component and the second homogeneous component.

18. The method of claim 11, wherein the first homogenous component comprises a random copolymer.

15 19. The method of claim 11, wherein the second homogeneous component comprises a polypropylene polymer.

20 20. The method of claim 11, wherein the first homogeneous component and the second homogeneous component are melt spun to produce the heterogeneous material.

21. The method of claim 11, wherein the first homogeneous component comprises a scrim material.

22. The method of claim 21, wherein the second homogeneous component comprises a plurality of fibers which are spun into the scrim material.

23. The method of claim 22, wherein the scrim material shrinks relative to the plurality of fibers.

24. A method for producing a composite material having a structure for accommodating passage of fluids through the composite material, the method comprising the steps of:

forming a first layer having a first shrinkage extent;

applying a second layer to the first layer to form the composite material, the second layer having a second shrinkage extent different from the first shrinkage extent; and

heating the composite material to produce the structure, wherein at least one of the first layer and the second layer shrinks.

25. The method of claim 24, wherein the first layer shrinks relative to the second layer.

26. The method of claim 24, wherein the second layer shrinks relative to the first layer.

27. The method of claim 24, further comprising the step of creping the first layer before the second layer is applied to the first layer.

28. The method of claim 24, further comprising the step of stretching the second layer before the second layer is applied to the first layer.

29. The method of claim 24, further comprising the step of pattern embossing the first layer to form thermal bonds which extend through the first layer.

30. A structured material, comprising:

a first component having a first shrinkage extent;

a second component combined with the first component to form a material, the second component having a second shrinkage extent different from the first shrinkage extent, wherein at least one of the first component and the second component is shrinkable to form the structured material.

31. The structured material of claim 30, wherein the first component forms a first layer, the second component forms a second layer, and the second layer is bonded to the first layer.

32. The structured material of claim 30, wherein the first component comprises a nonwoven web.

33. The structured material of claim 30, wherein the second component comprises a film.

34. The structured material of claim 30, wherein the second layer has a shrinkage extent greater than the first layer.

35. The structured material of claim 30, wherein the first component and the second component form a heterogeneous structured material.

36. The structured material of claim 30, wherein the first component comprises a polyethylene copolymer and the second component comprises a polypropylene polymer.

37. The structured material of claim 36, wherein the first component is shrinkable relative to the second component.

38. The structured material of claim 30, wherein the first component forms a scrim material and the second component forms a plurality of fibers, the plurality of fibers spun into the scrim material.

39. The structured material of claim 38, wherein the scrim material shrinks relative to the plurality of fibers.

5 40. The structured material of Claim 30, comprising a personal care absorbent product.

41. The structured material of Claim 30, comprising one of a spacer layer, a fastener, a filter medium, an air filter, a liquid filter, a facemask, and a wipe.